

AMENDMENTS TO THE SPECIFICATION

After the first full paragraph on page 6 please insert the following:

Fig. 3 is a cross sectional view of an exemplary embodiment of a developing roller according to the present invention.

Fig. 4 is a perspective view of an exemplary embodiment of the present invention of the developing roller using a mold.

Please replace paragraphs [0021] with the following amended paragraph:

A toner carrier according to an embodiment of the present invention is described with reference to Figs. 3 and 4 and comprises a highly conductive shaft 2, a semi-conductive elastic layer 3 formed on the outer periphery of the shaft 2, and a semi-conductive resin outer layer 31 formed on the semi-conductive elastic layer 3.

Please replace paragraphs [0024] with the following amended paragraph:

Specific examples of the elastomer include silicone rubber, EPDM, NBR, natural rubber, SBR, butyl rubber, chloroprene rubber, acrylic rubber, epichlorohydrin rubber, EVA, polyurethane, and mixtures thereof. In particular, silicone rubber, EPDM, epichlorohydrin rubber, and polyurethane are preferably used. The elastomer may be used as a foamed member obtained by chemically foaming the elastomer with a foaming agent, or a foamed member such as a polyurethane foam obtained by mechanically entraining air in the elastomer. In the present invention, so-called RIM (reaction injection molding) may be employed in a forming process for

integrating the shaft 2 and the elastic layer 3. That is, two kinds of monomer components composing the raw material of the elastic layer 3 are mixed and injected into a cylindrical mold 12, as shown in Fig. 4, so that the mixed material is foamed at the same time as the polymerization reaction, thereby integrating the shaft 2 and the elastic layer 3. According to this, the forming process takes only about 60 seconds from injection of materials to the stripping from the mold 12, thereby significantly reducing the production cost.

Please replace paragraphs [0035] with the following amended paragraph:

As for the developing roller of this embodiment, as shown in ~~FIG. 1~~FIG. 3, the resin outer layer 3a is formed on the semi-conductive elastic layer 3 by curing an ultraviolet-curable resin or an electron-beam-curable resin for adjusting the resistance and controlling the charge and the supply amount of toner. Specific examples of the ultraviolet-curable resin or the electron-beam-curable resin include polyester resin, polyether resin, fluoroplastic, epoxy resin, amino resin, polyamide resin, acrylic resin, acrylic urethane resin, urethane resin, alkyd resin, phenol resin, melamine resin, urea resin, silicone resin, and polyvinyl butyral resin. These may be used singly or in combination of two kinds or more. Further, a denatured resin in which a specific functional group is introduced into one or more of the aforementioned resins may be used.

Please replace paragraphs [0044] to [0047] with the following amended paragraphs:

In this embodiment of the present invention, fine particles 11 are dispersed into the resin outer layer 3a to form roughness in the surface of the resin outer layer 3a.

Preferably used as the fine particles 11 are fine particles of a rubber or a synthetic resin, or carbon fine particles. More concretely, fine particles 11 of one kind or a mixture of two kinds or more selected from a group consisting of silicone rubber, fluoroplastic, urethane elastomer, urethane acrylate, melamine resin, phenol resin, and glassy carbon are preferable.

The added amount of fine particles 11 is in a range of 0.1 to 100 parts by weight, preferably, 5 to 80 parts by weight relative to 100 parts by weight of the resin.

The mean particle diameter of the fine particles 11 is suitably in a range of 1 to 50 μm , particularly, 3 to 20 μm . The ratio "a/b" between the mean particle diameter "a" (μm) and the thickness "b" (μm) of the resin outer layer 3a is in a range of 0.03 to 0.5, preferably, 0.05 to 0.4. The thickness "b" of the resin outer layer is preferably in a range from 1 to 100 μm as will be described later. By setting the ratio "a/b" in the above-mentioned range, proper fine roughness can be formed on the surface of the resin outer layer 3a.